TREASURE ISLAND NAVAL STATION
TREASURE ISLAND, CALIFORNIA

Engineering Field Division/Activity:	EFAWEST
Major Claimant:	CINCPACFLT
Size:	717 Acres
Funding to Date:	$23,397,000
Estimated Funding to Complete:	$89,283,000
Base Mission:	Provides services and materials in support of operating forces and designated shore activities
Contaminants:	Acetone, acids, benzene, heavy metals, pesticides, PCBs

Number of Sites:		**Relative Risk Ranking of Sites:**			
CERCLA:	28	**High:**	14	**Not Evaluated:**	3
RCRA Corrective Action:	0	**Medium:**	5	**Response Complete:**	3
RCRA UST:	3	**Low:**	6	**Total Sites:**	31
Total Sites:	31				

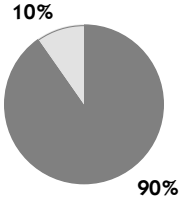
BRAC III

EXECUTIVE SUMMARY

The Naval Station Treasure Island (NAVSTA TI) is an island in the middle of the San Francisco Bay, midway between San Francisco and Oakland, California. The facility consists of two contiguous islands: the north island is named Treasure Island (TI) and the south island is named Yerba Buena Island (YBI). The sites of major concern at NAVSTA TI are Sites 6, 11, 14 and 22 which have soil and groundwater that are contaminated with petroleum products due to fuel storage and fire training activities. IR Site 11 is a former small landfill with multiple contaminants including petroleum products, volatile organic compounds, and metals. With few exceptions, contamination at most of the IR sites is the result of petroleum products originating from fueling operations. Two sites have chlorinated solvent contaminated groundwater. Numerous storage tanks and underground fuel lines exist, many of which have been gradually abandoned since the 1950s. The Navy has since changed its operational processes to prevent further contamination. NAVSTA TI is under a Federal Facilities Site Remediation Agreement (FFSRA) with the California Environmental Protection Agency, Department of Toxic Substances (DTSC) and the Regional Water Quality Control Board (RWQCB) which was signed on September 9, 1992.

NAVSTA TI is surrounded by the waters of San Francisco Bay. Potential receptors of soluble contamination would include flora and fauna using or inhabiting the surrounding waters. Currently, habitat for endangered or sensitive species on NAVSTA TI is very limited, although some have been observed at or near NAVSTA TI. There is limited potential for human contact with or consumption of groundwater since drinking water wells are not used on NAVSTA TI.

A Restoration Advisory Board (RAB) was formed in December 1993 and has 29 community members including environmental groups and individual community members, excluding regulators and Navy personnel. The RAB provides community advice on issues related to base closure and environmental restoration. A Community Relations Plan has been written and two public information repositories have been established.



Current Status Of Sites

Studies Underway	28
Cleanups Underway	0
Response Complete	3
TOTALS	31

Since the beginning of the Installation Restoration Program (IRP) at NAVSTA TI, a total of eight IR sites have been identified. Field work for a Phase II Remedial Investigation (RI) study began in FY95 to further characterize the extent of contamination and to collect data necessary for evaluation of remedial alternatives. The Phase II RI is being conducted in two steps. The Phase IIA RI is focusing on existing groundwater monitoring and tidal influence study, while the Phase IIB RI is focusing on further characterization and contaminant delineation. Two removal actions have been initiated in FY95. At Site 6 (Fire Training Area) floating product removal by bailer and skimmer pump is ongoing. At Site 1 (Medical Clinic) contaminated soil was removed. There are three Underground Storage Tank (UST) sites in the IR program, all in a study phase.

The Phase II RI fieldwork will continue during FY96. A basewide interim groundwater monitoring plan for existing and new monitoring wells will be prepared in FY96 and implemented in FY97 and FY98. Phase II Ecological Risk Assessment (EA) work for terrestrial (onshore) sites and offshore Site 27 (Clipper Cove Skeet Range) will be initiated and completed in FY96. Phase II EA work for Site 13 (Stormwater outfalls) will be initiated in FY97. Also in FY96, an Engineering Evaluation/Cost Analysis (EE/CA) will be prepared for interim removal actions for floating product and contaminated soil at Site 6 (Fire Training Area), contaminated soil at Site 14 (New Fuel Farm), and contaminated soil at Site 22 (Navy Exchange Service Station). A Corrective Action Plan (CAP) for petroleum only sites is being considered which will incorporate a treatability study and design of a bioremediation system.

Immunoassay field tests, a rapid field screening technique, were used extensively at NAVSTA TI to guide the Phase IIB RI. Immunoassays allow more data to be reported faster and for less money than does the use of an analytical laboratory for analyses. Since results were immediately available, additional sampling locations were quickly identified and the field investigation accelerated. By field screening 80 percent of all samples, approximately $1 million in analytical costs was avoided.

The Base Realignment and Closure (BRAC) Commission recommended NAVSTA TI for closure. Operational closure of NAVSTA TI is scheduled for September 1997. The Navy plans to transfer property throughout the closure process as it becomes suitable for lease or transfer. At this time, no leases or transfers of property have occurred. However, two buildings have been licensed to the city of San Francisco for use as film studios. In addition, the Department of Labor will be operating a Jobs Corps Training Center at NAVSTA TI.

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RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - TI and YBI are surrounded by the waters of San Francisco Bay. TI is a man-made island composed of dredged materials consisting of poorly graded fine sand placed over Yerba Buena Shoals. Groundwater at TI is generally encountered at 30-72 inches below ground surface. Because of the presence of relatively impermeable silt and clay lenses, there may be some perched conditions above the shallow water table. The direction of flow for both groundwater and surface runoff at TI is towards the Bay. Soluble contaminants would tend to migrate vertically through the sand to the water table or migrate overland in surface runoff. Less soluble contaminants may tend to bind with the soils and become relatively immobile.

YBI is a natural rock island with minimal soil cover. Surface soils are sandy loam to gravelly loam and subsoils are gravelly loam to sandy clay loam. Bedrock on YBI consists of sandstone and shale. Although there is limited information concerning groundwater at YBI, the groundwater in similar sites in the San Francisco Bay area is commonly present in sandstone or fractured shale due to infiltration. In the filled areas at YBI on the eastern side, soluble contaminants would potentially migrate to the Bay waters. At other areas on the Island, the surface runoff would either transport potential contaminants to the Bay or runoff would infiltrate into the Franciscan sandstone and shale. Less soluble contaminants would tend to bind with the soils and bedrock becoming relatively immobile or leaching small quantities to the surface runoff and ground water.

Drinking water wells are not used on TI or YBI. Subsurface water at TI and YBI proves impotable due to contact with the saline to brackish Bay waters. Water used by the facilities is conveyed by pipeline from San Francisco or Emeryville via the Bay Bridge.

NATURAL RESOURCES - TI consists of approximately 445 acres of developed flat terrain, covered mainly by buildings, roads, and parking lots. Most of the vegetation has been cultivated in landscaped areas. Any undeveloped habitat on NAVSTA TI is found on YBI, where eucalyptus woodlands represent the largest habitat. Brushland, mixed woodland, and grassland are also present on YBI.

The Bay Area supports a variety of fish, birds and mammals. The fishery resource includes anadromous fish which migrate through the Bay to spawn; native fish that remain in the area for life and shellfish such as crab and shrimp. The Bay is a seasonal home for many migrating birds since the San Francisco Estuary is a stopping point along the Pacific Flyway. Migratory birds observed at or near NAVSTA TI include several species of harvested waterfowl and passerine birds. The California sea lion and harbor seal are routinely seen in the San Francisco Bay waters at NAVSTA TI. A small group of harbor seals has been reported to frequent the southwestern and western shorelines of YBI during the winter. A survey of both Federal and California endangered or threatened species observed at or near NAVSTA TI included 7 animals and 17 plant species.

The only rare or sensitive habitat that may be present at NAVSTA TI are the mudflats, which may be located on the western side of the cove between TI and YBI; and threatened and endangered species habitats.

RISK - Both a draft Baseline Human Health Risk Assessment and a draft Ecological Risk Assessment were prepared in conjunction with the draft Phase I Remedial Investigation Report. Based on the results of the risk assessments, site characterization, and discussions with the regulatory agencies, the Navy is proceeding with no action at Site 3 and no further action after minimal soil removal at Site 1. Several sites, including Sites 27, 28 and 29 were recommended for further investigation during the Phase II Remedial Investigation and Ecological Risk Assessment field work. The Phase II Ecological Risk Assessment is currently ongoing at NAVSTA TI to assess risks to terrestrial and aquatic receptors.

For the DOD Relative Risk Ranking System, 14 IR sites were ranked as high relative risk. The high rankings are primarily due to known contamination on the site and the migration potential to ecological receptors present in the Bay or YBI, or exposure of on-site personnel through direct contact with both the soil and the near surface ground water. The groundwater is likely to be connected to the San Francisco Bay. A tidal influence study was completed in FY 95.

REGULATORY ISSUES

LEGAL AGREEMENTS - A Federal Facility Site Remediation Agreement between the Navy, the Department of Toxic Substances Control (DTSC), and the Regional Water Quality Control Board (RWQCB) was signed on September 9, 1992. Under this agreement, the Navy agreed to undertake, seek adequate funding for, implement, and report on specified tasks associated with environmental assessment and response actions for 22 sites under the IRP in accordance with CERCLA. The schedule in the Federal Facility Site Remediation Agreement has been modified to be consistent with the comprehensive strategy in the BRAC CLEANUP Plan (BCP) and includes three newly identified installation restoration sites and offshore operable unit (Sites 27 and 28). Therefore, a total of 25 installation restoration sites will be investigated. NAVSTA TI is not on the National Priorities List.

PARTNERING - The BRAC Cleanup Team (BCT) includes a member from each of the Navy, the U. S. EPA Region IX, and the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC). The BCT has worked closely with the Remedial Project Manager (RPM) to expedite the RI process at NAVSTA TI.

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - The Technical Review Committee (TRC) was formed to provide public involvement in the Installation Restoration Program (IRP) decision-making process. At the December 1993 meeting, the TRC was expanded into a Restoration Advisory Board (RAB) which represents the interests of a broader and more diverse cross-section of the community. The RAB has 29 community members including environmental groups and individual community members. The RAB meetings serve as a forum for the Navy, regulatory agencies, and the community to discuss issues related to base closure, environmental restoration programs, real estate transfer, and decision-making. Meetings are held monthly, with special meetings scheduled to facilitate comments on documents that RAB members are reviewing. Community RAB members also meet monthly, without the regulatory agencies and the Navy, to discuss topics and agenda for the next full RAB meeting.

COMMUNITY RELATIONS PLAN - A Community Relations Plan (CRP) for the NAVSTA TI IRP was finalized April 23, 1992. The CRP will be revised to reflect the community relations requirement under BRAC. A mailing list of all interested parties in the community is maintained by the Navy and updated periodically. Fact sheets describing the status of the IRP activities are distributed to the mailing list and informal meetings are held frequently for the general public. The California Department of Toxic Substances and Control (DTSC) and the Navy held a Federal Facility Workshop in October 1994 at Treasure Island.

INFORMATION REPOSITORY - A public repository for information has been established at NAVSTA TI. A second repository has been established at the Public Library (main branch) in San Francisco. These repositories contain information relative to environmental activities at NAVSTA TI. A copy of the Administrative Record documents are contained in the Information Repository. An Administrative Record file has also been established at EFA WEST in accordance with CERCLA requirements.

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BASE REALIGNMENT AND CLOSURE

III **BRAC** - In July 1993, the BRAC Commission recommended closure of NAVSTA TI and relocation of the Naval Reserve Center to Alameda, California, and the Naval Technical Training Center to Great Lakes, Illinois, and Little Creek, Virginia. Closure is scheduled for September 1997. The Navy plans a gradual drawdown of personnel and activities prior to the actual closure date. The Navy plans to transfer property throughout the closure process as it becomes suitable for lease or transfer. The community reuse plan and Environmental Baseline Survey will be necessary for the efficient transfer of property.

BRAC CLEANUP TEAM - The BRAC Cleanup Team (BCT) was established in early FY94 and has presented community workshops on CERCLA and the cleanup process. The BCT works closely with the project team to expedite cleanup and to implement cost saving measures. The BCT includes the BRAC Environmental Coordinator, representatives of the EPA Region IX, and the California Environmental Protection Agency's Department of Toxic Substances Control.

DOCUMENTS - The BRAC Cleanup Plan was finalized in March 1995. The draft Environmental Baseline Survey (EBS) was completed in FY94, and then finalized in FY95. The Environmental Baseline Survey placed all parcels in environmental condition of property categories 1, 2, 6, and 7. Nine parcels will be designated as Community Environmental Response Facilitation Act (CERFA) clean. The Phase II Ecological Risk Assessment Work Plan that began in FY94 continues. For the Feasibility Study, bioremediation of soil and oxidation of groundwater was recommended as the most appropriate treatment technology. A standard format No Action Decision Document is being developed to save time writing and reviewing documents for No Action sites.

Environmental Conditions of Property Classification						
1	2	3	4	5	6	7
28 acres	0 acres	0 acres	0 acres	0 acres	189 acres	286 acres

LEASE/TRANSFER - The Navy intends to make NAVSTA TI property available for interim use and to transfer NAVSTA TI property as it becomes available and when requested by the city of San Francisco. Parcels may be identified for transfer based upon a Finding of Suitability to Lease (FOSL) or a Finding of Suitability to Transfer (FOST). These mechanisms will be developed and incorporated as the NAVSTA TI closure continues. FOSLs have been completed for building 2, building 180, and the elementary school, which are licensed to the city of San Francisco. The city of San Francisco has sublicensed the buildings to film companies. Currently, a FOSL is being prepared for building 3.

REUSE - The community reuse plan is being developed, and is scheduled for completion in one year. The city of San Francisco, with the assistance of the citizens' reuse committee for NAVSTA TI, plans to issue a draft reuse plan by mid 1996. At this time, no leases or transfers of property have occurred. However, two buildings have been licensed to the city of San Francisco for use as film studios. In addition, the Department of Labor will be operating a Jobs Corps Training Center at NAVSTA TI (FOST is currently being prepared).

FAST-TRACK INITIATIVES - Early actions are an important component of the Installation Restoration Project (IRP) at NAVSTA TI. Based on the results of the draft Phase I Remedial Investigation and discussions with the regulatory agency representatives, four IR sites are currently targeted for removal actions, while additional early actions are being considered at 14 sites. Several other IR sites have been identified that may have the potential to accelerate removal actions or interim remedial actions.

HISTORICAL PROGRESS

FY86

Site 14 - Test Underground Gasoline Spill, Report #1, completed in April as part of the Site Inspection (SI).

FY87

Site 6 - Initial Hazardous Material Investigation, Report #2, completed in August and Investigation of Potential Soil and Groundwater Contamination of Tank 2, Report #3 completed in July as part of SI.
Site 20 - Geotechnical Engineering Study, Proposed Family Housing Project, Report #4, was completed as part of SI.

FY88

Sites 1-26 - Preliminary Assessment/Site Inspection (PA/SI), Report #5, completed in April.
Sites 1, 3-7, 9-17, 19-22 and 24-26 - PA/SI recommended further action.
Sites 2, 8, 18, 23 - No further action recommended in PA/SI.
Sites 8, 19, 25 - The State of California reviewed PA/SI and recommended further investigation for these sites. The additional SI was completed in April and an Remedial Investigation/Feasibility Study (RI/FS) was recommended for all three sites.

FY89

Site 20 - SI Report, Former Tank 225A, Report #6, completed in November.
USTs - Five Underground Storage Tanks (USTs) removed.

FY90

Site 11 - UST Removal, Tank 270, Report #7, completed July as part of SI.
USTs - Two USTs removed.

FY91

Sites 8, 19 and 25 - SI Report, Report #8, was completed April and recommended an RI/FS for all three.
Site 20 - Soil Aeration Field Work Plan, Status on Aeration Project, and Bioremediation Treatment Letter Report, Report #9, completed February and October 1991, and February 1992, respectively, as part of Interim Remedial Action (IRA).

FY92

Federal Facility Site RemediationAgreement (FFSRA) signed by Department of the Navy and the State of California in September.
Site 12 - Preliminary Risk Assessment Report, Report #10, completed September as part of SI.
Sites 6, 14 - Suitability Study for Floating Product Removal, Report #11, completed February as part of IRA.
Site 6 - Hazardous Waste Testing Old Fire Fighting Training School, Report #12, completed April as part of SI.
USTs - Twenty-three USTs removed.

FY93

Sites 13, 13A - Stormwater Pollution Prevention Plan, Report #13, completed in June 1993 as part of PA.
Site 29 - Soil and Air Testing, Report #17, completed June and September as part of PA.

FY94

Sites 1, 3, 4-17, 19-22, 24 and 25 - Draft Phase I RI Report, Report #14, completed in November.

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Sites 1, 3, 4-12, 14-17, 19-22, 24 and 25 - Draft Baseline Human Health Risk Assessment, Report #15, completed November.
Sites 1, 3, 4-17, 19-22, 24 and 25 - Draft Ecological Risk Assessment, Report #16, completed November.
Sites 1, 3, 4-12, 14-17, 19-22, 24 and 25 - Draft Initial Screening of Technologies, Report #18, as part of FS.
Site 14 - Characterization Wells Letter, Report #19, completed January as part of IRA.
Sites 6, 22 and 25 - Draft Summary Report of UST Removals, Report #20, completed January 1994 as part of IRA.
USTs - Five USTs removed.

PROGRESS DURING FISCAL YEAR 1995

FY95

ALL SITES - Field work began for Phase II RI on most sites. Groundwater sampling for all existing wells was completed.
Site 1 - Contaminated soil was removed by hand due to site constraints.
Site 6 - Floating product removal by bailer and skimmer pump was initiated and ongoing.

PLANS FOR FISCAL YEARS 1996 AND 1997

FY96

ALL SITES - The Phase II RI field work will continue.
Groundwater sampling of the new monitoring wells will be completed. A basewide interim groundwater monitoring plan for existing and new monitoring wells will be prepared in FY96 and implemented in FY97 and FY98. After completion of the Phase II RI, the draft RI will be prepared in FY96 and then finalized in FY97. Phase II Ecological Risk Assessment work will be initiated for terrestrial (onshore) sites and Site 27 (offshore) in FY96.
Site 6, 14 and 22 -Anticipate completing bioremediation treatability study.

FY97

ALL SITES - Basewide interim groundwater monitoring program will be implemented. The FS Report will be completed.
Site 13 - Phase II Ecological Risk Assessment work will be initiated.

PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	25							
SI	25							
RI/FS			1	24				
RD						23		
RA								23
IRA		1(1)		3(3)				
RC	3		1		1			23
Cumulative Response Complete	11%		14%		18%			100%

UST	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
ISC	1		2					
INV					1			
CAP			1	1		1		
DES				1	1		1	
IMP					1		1	1
IRA	2(2)					1(1)		
RC					1			2
Cumulative Response Complete					33%			100%